

Application Serial No. 10/583,881
Reply to Office Action of July 11, 2011

PATENT
Docket: CU-4891

Listing of Claims

RECEIVED
CENTRAL FAX CENTER
OCT 11 2011

1.-6. (cancelled)

7. (previously presented) A method of recovering a base paper for gypsum board, which is configured to recover a base paper for gypsum board from a waste material of gypsum board comprising a gypsum core and the base paper for gypsum board adhering thereto, comprising the steps of
 breaking the waste material of gypsum board,
 separating a gypsum component and a paper piece of the base paper for gypsum board from the broken waste material of gypsum board, and
 washing the separated paper piece with water in a rotary drum-type washing device so as to eliminate a gypsum component adhering to the paper piece from the paper piece, and further comprising a step of
 previously dispersing or mixing the separated paper piece into a portion of washing water before the separated paper piece is introduced to the rotary drum-type washing device, and
 dewatering the water-washed paper piece wherein the step of dewatering the paper piece comprises squeezing and dewatering of the water-washed paper piece by one of a roller, a centrifugal machine, and a squeezing machine,
 wherein the rotary drum-type washing device comprises a paper piece inlet at one end of rotatably lying air and water through-flow drum and a paper piece outlet at the other end thereof and is capable of supplying washing water to a paper piece in the air and water through-flow drum.

8.-10. (cancelled)

11. (previously presented) An apparatus of recovering a base paper for gypsum board, comprising
 a device configured to break a waste material of gypsum board,
 a device configured to separate a gypsum component and a paper piece from the broken waste material of gypsum board,
 a rotary drum-type washing device configured to wash the separated paper

Application Serial No. 10/583,881
Reply to Office Action of July 11, 2011

PATENT
Docket: CU-4891

piece with water so as to eliminate a gypsum component adhering to the paper piece from the paper piece, and

a device configured to dewater the water-washed paper piece, and further having

a device configured to disperse or mix the separated paper piece into water before washing the separated paper piece with water,

wherein the rotary drum-type washing device comprises a paper piece inlet at one end of rotatably lying air and water through-flow drum and a paper piece outlet at the other end thereof and is capable of supplying washing water to a paper piece in the air and water through-flow drum,

wherein the dewatering device is a device configured to squeeze and dewater the water-washed paper piece by one of a roller, a centrifugal machine, and a squeezing machine.

12.-13. (cancelled)

14. (previously presented) The method of recovering a base paper for gypsum board as claimed in claim 7, wherein a size of screen mesh of the air and water through-flow drum is about 0.177 mm to about 5 mm.

15. (previously presented) The apparatus of recovering a base paper for gypsum board as claimed in claim 11, wherein a size of screen mesh of the air and water through-flow drum is about 0.177 mm to about 5 mm.

16. (previously presented) The method of recovering a base paper for gypsum board as claimed in claim 7, wherein the waste material of gypsum board is broken into a broken piece of the waste material of gypsum board and the broken piece of the waste material of gypsum board has a longitudinal diameter of about 100 mm or less.

17. (previously presented) The apparatus of recovering a base paper for gypsum board as claimed in claim 11, wherein the waste material of gypsum board is broken into a

Application Serial No. 10/583,881
Reply to Office Action of July 11, 2011

PATENT
Docket: CU-4891

broken piece of the waste material of gypsum board and the broken piece of the waste material of gypsum board has a longitudinal diameter of about 100 mm or less.

18. (previously presented) The method of recovering a base paper for gypsum board as claimed in claim 7, wherein the gypsum component and the paper piece of the base paper for gypsum board are separated from the broken waste material of gypsum board by a screen mesh with a size of about 2mm to about 20 mm.

19. (previously presented) The apparatus of recovering a base paper for gypsum board as claimed in claim 11, wherein the gypsum component and the paper piece are separated from the broken waste material of gypsum board by a screen mesh with a size of about 2 mm to about 20 mm.